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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/834,504	04/13/2001	Masato Shimakawa	450100-03160	5787

20999	7590	04/12/2005

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EXAMINER
WOZNIAK, JAMES S

ART UNIT	PAPER NUMBER
2655	

DATE MAILED: 04/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>03 February 2005</u>.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-25</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-7,9-20 and 22-25</u> is/are rejected.

7)☒ Claim(s) <u>8 and 21</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>13 April 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   In response to the office action from 1/24/2005, the applicant has submitted a request for

continued examination, filed 2/3/2005, amending claims 1 and 13-14, while arguing to traverse

the art rejection based on the limitation regarding temporarily storing speech command

information in a storage means for a predetermined period of time *(Amendment, Pages 12-13)*.

The applicant's arguments have been fully considered but are moot with respect to the new

grounds of rejection in view of Sugiyama et al *(U.S. Patent: 6,345,245)*.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

3.   **Claims 1, 2, 5-7, 9-10, 13-15, and 18-20, and 22-23** are rejected under 35 U.S.C. 103(a)

as being unpatentable over Everhart et al in view of Nguyen et al *(U.S. Patent: 6,219,703)*, and

further in view of Sugiyama et al *(U.S. Patent: 6,345,245)*.

With respect to **Claims 1 and 13**, Everhart discloses:

An information processing apparatus and method for controlling, in accordance with a

plurality of speech commands input by a user, a plurality of electronic apparatuses on a network

connected to said information processing apparatus, said information processing apparatus

comprising:

Command definition information obtaining means for obtaining command definition

information that defines a correspondence between the plurality of speech commands input by

the user and a plurality of control commands for controlling said plurality of electronic

apparatuses *(speech processor for recognizing an utterance and determining its associated*

command, Col. 1, Lines 51-54);

Storage means for storing said command definition information obtained by said

command definition information obtaining means *(voice application software within a speech*

processor to determine a command function from a speech input, Col. 3, Lines 11-17. Also, it

would be inherent that the voice application command definitions would be contained in a

storage means to provide system access to all valid speech commands and enable their

updating);

Speech recognition means for recognizing a speech command input by the user *(speech*

processor, Col. 1, Lines 51-54);

Determining means for determining a control command corresponding to the speech

command as recognized by said speech recognition means, based on said command definition

information stored in said storage means *(voice application software for determining a command*

related to a speech input, Col. 3, Lines 15-17); and

Control means for controlling one of said plurality of electronic apparatuses using the

control command determined by said determining means *(speech processor that recognizes*

commands and transmits the corresponding function to a controllable device, Col. 1, Lines 51-

54).

Everhart does not teach a means for connection status detection that is further utilized to

add and delete command information accordingly, however Nguyen discloses:

When one or more new electronic apparatuses are connected to said network, new

command definition information associated with one or more new electronic apparatuses is

added to said storage means *(detecting the presence of a device on a network and obtaining*

device data upon detection, Col. 2, Lines 7-11).

Everhart and Nguyen are analogous art because they are from a similar field of endeavor

in device control over a network. Thus, it would have been obvious to a person of ordinary skill

in the art, at the time of invention, to combine the method of detecting the presence of a device

on a network and obtaining device management data upon detection as taught by Nguyen with

the speech command recognition system capable of identifying a speech input as being

associated with a particular device in order to perform a requested function as taught by Everhart

to create a more adaptive command recognition system, capable of adding command data in the

form of a speech vocabulary upon the addition of a new device to a network.

Everhart in view of Nguyen do not teach a process of storing speech command data

temporarily for a predetermined time period if a device is disconnected from a speech

recognition network, however, Sugiyama recites a method that provides for temporarily storage

of a speech recognition dictionary if a dictionary storing device becomes disconnected from a

network, wherein the predetermined time period is a period from dictionary disconnection to the

reestablishment of communication *(Col. 5, Lines 28-42)*.

Everhart, Nguyen, and Sugiyama are analogous art because they are from a similar field

of endeavor in device control over a network. Thus, it would have been obvious to a person of

ordinary skill in the art, at the time of invention, to modify the teachings of Everhart in view of

Nguyen with the means of temporarily storing speech recognition dictionary data if a device

becomes disconnected from a network as taught by Sugiyama in order to prevent a loss of speech

recognition data if a device disconnect occurs by providing a temporary storage means until a

communication is reestablished *(Sugiyama, Col. 5, Lines 36-42)*.

With respect to **Claims 2 and 15**, Everhart further recites:

An information processing apparatus, wherein said command definition information is

associated with ID information of said plurality of electronic apparatuses *(specific voice*

commands identifying a particular device, upon which a control function will be performed, such

as vehicle temperature setting or power window position adjustment, Col. 5, Lines 27-33).

With respect to **Claims 5 and 18**, Everhart in view of Nguyen teaches the speech

command recognition system and method capable of identifying a speech input as being

associated with a particular device in order to perform a requested function, as applied to Claims

1 and 13. Everhart in view of Nguyen does not specifically suggest that command definition

information is obtained from a server or storage medium; however, it would have been obvious

to one of ordinary skill in the art, at the time of invention, to obtain command definition

information from a server or computer readable medium since storage of speech command

information on a server or storage medium is a means, well-known in the art, of providing access

to speech command information at a central location, thus reducing needed memory at a local

controllable device.

With respect to **Claims 6 and 19**, Everhart additionally discloses:

An information, further comprising ID information obtaining means for obtaining ID

information of said plurality of electronic apparatuses, wherein said command definition

information obtaining means obtains said command definition information based on the ID

information of said plurality of electronic apparatuses obtained by said ID information obtaining

means *(speech processor that recognizes commands, identifies the corresponding controllable*

device and function, and transmits the command to the appropriate device, Col. 1, Lines 51-54).

With respect to **Claims 7 and 20**, Everhart further recites:

An information processing apparatus, wherein said ID information includes at least one

of node ID, product ID, machine ID, and type ID *(specific voice commands identifying a*

particular device (type ID), upon which a control function will be performed, such as vehicle

temperature setting or power window position adjustment, Col. 5, Lines 27-33).

With respect to **Claims 9 and 22**, Nguyen further recites:

Connection status detecting means for detecting the connection status of said plurality of

electronic apparatuses *(detecting the presence of a device on a network and obtaining device*

data upon detection, Col. 2, Lines 7-11).

With respect to **Claims 10 and 23**, Everhart additionally discloses:

An information processing apparatus, further comprising selecting means for allowing

the user to select one of said plurality of electronic apparatuses, wherein said determining means

is allowed to determine the control command corresponding to the speech command as

recognized by said speech recognition means, based on only part of said command definition

information corresponding to the electronic apparatus selected by said selecting means *(key*

words identifying a particular device, upon which a control function will be performed, such as

vehicle temperature setting or power window position adjustment, Col. 5, Lines 27-33, thus since

a particular device is identified, further parameter adjustment through speech recognition will

be directed only to the selected device, Col. 5, Lines 56-58).

With respect to **Claim 14**, Everhart in view of Nguyen teaches the speech command

recognition system capable of identifying a speech input as being associated with a particular

device in order to perform a requested function and removing and adding command information

based on device connection status, as applied to Claim 13. Everhart does not specifically suggest

command definition storage on a computer readable medium, however, it would have been

obvious to one of ordinary skill in the art, at the time of invention, to store the speech commands

taught by Everhart on a computer readable medium to increase command compatibility and

usability by providing a means for command use with multiple computer systems.

4.   **Claims 3,4, 16, and 17** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Everhart et al in view of Nguyen et al, in view of Sugiyama et al, and further in view of

Vanbuskirk et al *(U.S. Patent: 6,308,157).*

With respect to **Claims 3 and 16**, Everhart in view of Nguyen, and further in view of

Sugiyama teaches the speech command recognition system and method capable of identifying a

speech input as being associated with a particular device in order to perform a requested function

and removing and adding command information based on device connection status, as applied to

Claims 1 and 13. Everhart in view of Nguyen, and further in view of Sugiyama does not teach a

means of defining acceptable commands based on device operation status, however Vanbuskirk

discloses:

An information processing apparatus, wherein said command definition information

defines, on the basis of operation status of said plurality of electronic apparatuses, acceptable

speech commands, control commands corresponding to the speech commands, and transitions of

operation status which occur on execution of each of the control commands *(monitoring a system*

state of operation and determining acceptable voice commands for a current state, Col. 2, Lines

29-35).

Everhart, Nguyen, Sugiyama, and Vanbuskirk are analogous art because they are from a

similar field of endeavor in control-related processing systems. Thus, it would have been

obvious to a person of ordinary skill in the art, at the time of invention, to combine the method of

determining a system state of operation so as to define acceptable speech commands for the

current state as taught by Vanbuskirk with the speech command recognition system capable of

identifying a speech input as being associated with a particular device in order to perform a

requested function and removing and adding command information based on device connection

status as taught by Everhart in view of Nguyen and further in view of Sugiyama to create a less

error-prone speech command interface by decreasing the quantity of acceptable speech

commands (some of which may have no function at a particular operation state) through the

determination of a device operation state and its associated commands *(Vanbuskirk, Col. 2, Lines*

39-44).

With respect to **Claims 4 and 17**, Everhart in view of Nguyen, and further in view of

Sugiyama teaches the speech command recognition system and method capable of identifying a

speech input as being associated with a particular device in order to perform a requested function

and removing and adding command information based on device connection status, as applied to

Claims 1 and 13. Everhart in view of Nguyen, and further in view of Sugiyama does not teach

the ability to detect a state of device and its associated command function, however Vanbuskirk

discloses:

An information processing apparatus, wherein said determining means comprises

operation status detecting means for detecting the operation status of said plurality of electronic

apparatuses, whereby said determining means determines, in accordance with the operation

status of said plurality of electronic apparatuses detected by said operation status detecting

means, the control command corresponding to the speech command as recognized by said speech

recognition means, based on said command definition information *(monitoring a system state of*

operation and determining acceptable voice commands corresponding to a system function for a

current state, Col. 2, Lines 29-35, and voice commands associated with a particular function for

a current state, Fig. 5).

Everhart, Nguyen, Sugiyama, and Vanbuskirk are analogous art because they are from a

similar field of endeavor in control-related processing systems. Thus, it would have been

obvious to a person of ordinary skill in the art, at the time of invention, to combine the method of

detecting a state of device operation and determining the appropriate voice commands and

corresponding functions as taught by Vanbuskirk with the speech command recognition system

capable of identifying a speech input as being associated with a particular device in order to

perform a requested function and removing and adding command information based on device

connection status as taught by Everhart in view of Nguyen, and further in view of Sugiyama to

reduce command processing errors by identifying a device operation state and making available

only those commands and functions that would be applicable since not all commands and

functions would be appropriate during every command state. Therefore, it would have been

obvious to combine Vanbuskirk with Everhart in view of Nguyen, and further in view of

Sugiyama for the benefit of implementing less complex processing within a speech command

interface system by detecting a device state of operation and limiting available commands and

functions to only those which are applicable for a particular state.

5.   **Claims 11 and 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Everhart et al in view of Nguyen et al, further in view of Sugiyama et al, and further in view of

Diehl et al *(U.S. Patent: 6,052,666)*.

        With respect to **Claims 11 and 24**, Everhart in view of Nguyen, and further in view of

Sugiyama teaches the speech command recognition system and method capable of identifying a

speech input as being associated with a particular device in order to perform a requested function

and removing and adding command information based on device connection status, as applied to

Claims 1 and 13. Everhart in view of Nguyen, and further in view of Sugiyama does not teach a

command history for operating the most recently used device if it is unclear as to which device a

speech command relates, however Diehl discloses:

        An information processing apparatus, further comprising control command history

storage means for storing history information regarding the control command determined by said

determining means, wherein an electronic apparatus in accordance with a user input or an

electronic apparatus which is found to be most recently operated according to the history

information stored in said control command history storage means is controlled using the control

command, if it is not otherwise determined which of said plurality of electronic apparatuses be

controlled using the control command *(generating a list of several devices that pertain to a*

single command and determining the target device through a statistical approach, Col. 3, Lines

41-46, and a change channel command received after a TV set has been turned on. Since, in this

case, the TV was the last device used, it would be more probable that the command would be

related to the TV rather than a VCR, Col. 4, Lines 3-6).

Everhart, Nguyen, Sugiyama, and Diehl are analogous art because they are from a similar

field of endeavor in control-related processing systems. Thus, it would have been obvious to a

person of ordinary skill in the art, at the time of invention, to combine the method of transmitting

a command to a most probable device through a statistical approach when a command pertains to

more than one device as taught by Diehl with the speech command recognition system capable

of identifying a speech input as being associated with a particular device in order to perform a

requested function and removing and adding command information based on device connection

status as taught by Everhart in view of Nguyen, and further in view of Sugiyama to create a

command recognition system in which command confusion is prevented by selecting a most

probable device when a single command pertains to more than one device. Also, it would have

been obvious to one of ordinary skill in the art, at the time of invention, that a most previously

operated device would also be a most probable device for receiving a voice command (as in a

case of commands for repeatedly changing channels on a television), thus implementing usage

history in determining a most probable device to receive a command.

6.   **Claims 12 and 25** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Everhart et al in view of Nguyen et al, further in view of Sugiyama et al and further in view of

Peck et al *(U.S. Patent: 5,375,063)*.

.   With respect to **Claims 12 and 25**, Everhart in view of Nguyen, and further in view of

Sugiyama teaches the speech command recognition system and method capable of identifying a

speech input as being associated with a particular device in order to perform a requested function

and removing and adding command information based on device connection status, as applied to

Claims 1 and 13. Everhart in view of Nguyen, and further in view of Sugiyama does not teach

the ability of the user to create a command vocabulary, however Peck discloses:

An information processing apparatus, further comprising command definition

information generation means for generating command definition information as desired,

wherein said command definition information obtaining means is allowed to obtain said

command definition information from said command definition information generation means

(creation of a user command vocabulary and corresponding device control signals, Col. 10,

Lines 5-20).

Everhart, Nguyen, Sugiyama, and Peck are analogous art because they are from a similar

field of endeavor in control-related processing systems. Thus, it would have been obvious to a

person of ordinary skill in the art, at the time of invention, to combine the ability of a user to

create a command vocabulary relating to device control signals as taught by Peck with the

speech command recognition system capable of identifying a speech input as being associated

with a particular device in order to perform a requested function and removing and adding

command information based on device connection status as taught by Everhart in view of

Nguyen to create a speech controlled system that is easier to use since a user is not required to

learn specific commands in order to operate a device and can create a user-specific command

vocabulary. Therefore, it would have been obvious to combine Peck with Everhart in view of

Nguyen, and further in view of Sugiyama for the benefit of creating a user-configurable speech

controlled system.

Allowable Subject Matter

7.   **Claims 8 and 21** are objected to as being dependent upon a rejected base claim, but

would be allowable if rewritten in independent form including all of the limitations of the base

claim and any intervening claims.

8.   The following is a statement of reasons for the indication of allowable subject matter:

        The prior art of record does not explicitly teach or fairly suggest a process of obtaining

speech command definition information based on a device ID in a node, product, machine, and

type order of priority in combination with an information processing apparatus that temporarily

stores command definition information when a device is disconnected from a speech recognition

network. The prior art of record also fails to explicitly teach or fairly suggest the above features

in combination with a means for adding speech command definition information when a device
is added to the network.

Conclusion

9.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure:

Lerner et al *(U.S. Patent: 5,129,072)*- teaches a method for temporarily storing data in a

storage device when another storage device is disconnected from a bus.

10.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to James S. Wozniak whose telephone number is (703) 305-8669

and email is James.Wozniak@uspto.gov. The examiner can normally be reached on Mondays-

Fridays, 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Doris To can be reached at (703) 305-4827. The fax/phone number for the

Technology Center 2600 where this application is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the technology center receptionist whose telephone number is (703) 306-

0377.

James S. Wozniak
3/8/2005

DAVID L. OMETZ
PRIMARY EXAMINER